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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/865,962	05/30/97	NIELSEN J	2860-058

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MCDERMOTT WILL & EMERY
600 13TH STREET NW
WASHINGTON DC 20005-3096

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EXAMINER	
LE,Q	
ART UNIT	**PAPER NUMBER**
2757	//

DATE MAILED: 02/17/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
08/865,962	Jakob NIELSEN
Examiner	**Group Art Unit**
Quoc-Khanh Le	2757

☒ Responsive to communication(s) filed on *Nov 18, 1999* .

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *three* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *2-7 and 9-22* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *2-7 and 9-22* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____ .

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____ .

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

1. This office action is responsive to the response filed on 11/18/99. Claims 2-7 and 9-22 are pending for examination. This office action is non-final.

Response to Arguments

2. Applicant's arguments with respect to claims 2-7 and 9-22 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 16 recites the limitation "events triggering recalculation" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. Examiner has rejected claim 16 as a dependent claim of claim 15.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

6. Claims 2 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Tobagi et al., U.S. 5,381,413 ("Tobagi").

As to claim 2, Tobagi teaches a system [figs. 1-3], comprising:

a bus (bus 12);

at least one communication interface connected to the bus (network interface circuit 26); and

a processor (CPU 14) connected to the bus, the processor configured to allocate communications bandwidth to the user connections serviced by the at least one communications interface based on at least one set of priorities (throttler transmits packets according to priority classes [col. 8, line 41 to col. 10, line 5]),

in which one set of priorities comprises priorities based on type of information being retrieved [col. 10, lines 6-11].

As to claim 22, Tobagi teaches a system [fig. 1-3], comprising:

a memory medium [main memory 16, disk memory 18];

a computer program, stored on the memory medium, the computer program comprising instructions for allocating communications bandwidth to communications connections based on at least one set of priorities (throttler transmits packets according to priority classes [col. 8, line 41 to col. 10, line 5]).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 3-7, 9-13, and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobagi et al., U.S. 5,381,413 ("Tobagi").

As to claim 3, Tobagi does not explicitly disclose that type of information includes at least one of information in HTML format, information in a style sheet format, information in a GIF image format and information in a JPEG image format. However, Tobagi teaches that video data may be assigned to the class of the highest priority and other types of data, such as transactional data, would be assigned to classes of lower priority [col. 10, lines 6-11]. Further, HTML, style sheet, GIF, and JPEG format are well known in the art. Therefore, one of ordinary skill in the art would have been motivated to modify Tobagi in order to enable Tobagi's system handle most common information formats.

As to claim 4, Tobagi teaches a system [figs. 1-3], comprising:

a bus (bus 12);

at least one communication interface connected to the bus (network interface circuit 26); and

a processor (CPU 14) connected to the bus, the processor configured to allocate communications bandwidth to the user connections serviced by the at least one communications interface based on at least one set of priorities (throttler transmits packets according to priority classes [col. 8, line 41 to col. 10, line 5]).

Tobagi does not teach that one set of priorities comprises priorities based on how fast user connection can receive information. However, a faster connection transmits more data (needs a higher bandwidth) than a slower connection. Therefore, it would have been obvious to modify

Tobagi's system by allocating bandwidth based on the speed of a user connection in order to make the system runs well in an environment with different connection speeds.

As to claim 5, Tobagi teaches a system [figs. 1-3], comprising:

a bus (bus 12);

at least one communication interface connected to the bus (network interface circuit 26); and

a processor (CPU 14) connected to the bus, the processor configured to allocate communications bandwidth to the user connections serviced by the at least one communications interface based on at least one set of priorities (throttler transmits packets according to priority classes [col. 8, line 41 to col. 10, line 5]).

Tobagi does not teach that one set of priorities comprises priorities based on which part of a document is being transmitted. However, Tobagi teaches that priorities can be based on data types (see claim 2) and parts of a document can contain different data types (text, image, etc.). Therefore, one of ordinary skill in the art would have been motivated to modify Tobagi's system in order to make Tobagi's system more universal.

As to claim 6, Tobagi teaches a system [figs. 1-3], comprising:

a bus (bus 12);

at least one communication interface connected to the bus (network interface circuit 26); and

a processor (CPU 14) connected to the bus, the processor configured to allocate communications bandwidth to the user connections serviced by the at least one communications interface based on at least one set of priorities (throttler transmits packets according to priority classes [col. 8, line 41 to col. 10, line 5]).

Tobagi does not teach that one set of priorities comprises priorities based on user identify. However, it would have been obvious that in a pay system, a user paying a higher fee can have a faster connection than a user paying a lower fee. Therefore, similarly to claim 4, one of ordinary skill in the art would have been motivated to modify Tobagi's system in order to make the system more universal.

As to claim 7, Tobagi teaches a system [figs. 1-3], comprising:

a bus (bus 12);

at least one communication interface connected to the bus (network interface circuit 26); and

a processor (CPU 14) connected to the bus, the processor configured to allocate communications bandwidth to the user connections serviced by the at least one communications interface based on at least one set of priorities (throttler transmits packets according to priority classes [col. 8, line 41 to col. 10, line 5]).

Tobagi does not teach that one set of priorities comprises priorities based on stored indicia indicating importance of the document. However, it would have obvious that an important document should be transmitted in a shorter time as possible in order to secure the document. Therefore, one of ordinary skill in the art would have been motivated to modify Tobagi in order to enhance the security of Tobagi's system.

As to claim 9, Tobagi teaches a system [figs. 1-3], comprising:

a bus (bus 12);

at least one communication interface connected to the bus (network interface circuit 26); and

a processor (CPU 14) connected to the bus, the processor configured to allocate communications bandwidth to the user connections serviced by the at least one communications interface based on at least one set of priorities (throttler transmits packets according to priority classes [col. 8, line 41 to col. 10, line 5]).

Tobagi does not teach that one set of priorities comprises priorities based on the state of application running on the processor. However, it would have obvious that a sleeping/waiting process does not transmit a lot of data as an active process. Therefore, one of ordinary skill in the art would have been motivated to modify Tobagi so that priorities based on state of application process in order to enhance the functionality of Tobagi's system.

As to claims 10 and 11, claim 10 and 11 have the similar limitations as claim 9 and therefore are rejected under the same rationale.

As to claim 12, Tobagi teaches a system [figs. 1-3], comprising:

providing an element for allocating communications bandwidth at a server to a plurality of user connections based on at least one set of priorities (throttler transmits packets according to priority classes [col. 8, line 41 to col. 10, line 5]).

Although Tobagi does not explicitly show that stations 13 can be user systems, it would have been obvious that using stations 13 as user systems depends merely on the environment, wherein Baugher's teaching is applied, but does not have any effects on the allocating bandwidth on communication line 17 based on a set of priorities.

As to claim 13, claim 13 has the similar limitations as claim 3(type of information), claim 4 (how fast user connection), claim 5 (which part of a documentation), claim 6 (user identity), claim 7 (stored indicia indicating importance of the document), and therefore is rejected under the same rationale.

As to claim 17, Tobagi teaches a system [figs. 1-3], comprising:

providing an element for allocating communications bandwidth at a server to a plurality of user connections based on at least one set of priorities (throttler transmits packets according to priority classes [col. 8, line 41 to col. 10, line 5]).

Although Tobagi does not explicitly show that stations 13 can be server systems, it would have been obvious that using stations 13 as server systems depends merely on the environment, wherein Baugher's teaching is applied, but does not have any effects on the allocating bandwidth on communication line 17 based on a set of priorities.

As to claim 18, claim 18 has the similar limitations as claim 9 and therefore is rejected under the same rationale.

As to claim 19, Tobagi teaches a system [figs. 1-3], comprising:

a network [fig. 3, communication link 17];

at least one server connected to the network [station 13];

at least one computer running at least one process connected to the network [fig. 10, network adapter 10], in which the at least one server or the at least one computer allocates bandwidth to a plurality of network connections based on at least one set of priorities (throttler transmits packets according to priority classes [col. 8, line 41 to col. 10, line 5]).

Although Tobagi does not explicitly show that stations 13 can be server systems, it would have been obvious that using stations 13 as server systems depends merely on the environment,

wherein Baugher's teaching is applied, but does not have any effects on the allocating bandwidth on communication line 17 based on a set of priorities.

As to claim 20, claim 20 has the similar limitations as claim 13 and 9, and therefore is rejected under the same rationale.

As to claim 21, Tobagi teaches a system [fig. 1-3], comprising:

a memory medium [main memory 16, disk memory 18];

a computer program, stored on the memory medium, the computer program comprising instructions for allocating communications bandwidth based on at least one set of priorities (throttler transmits packets according to priority classes [col. 8, line 41 to col. 10, line 5]). Although Tobagi does not explicitly show that stations 13 can be server and user systems, it would have been obvious that using stations 13 as server or user systems depends merely on the environment, wherein Baugher's teaching is applied, but does not have any effects on the allocating bandwidth on communication line 17 based on a set of priorities.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tobagi et al., U.S. 5,381,413 ("Tobagi") in view of Hahne et al., U.S. 5,115,430 ("Hahne").

Tobagi teaches most of the claimed limitations as applied to claim 12 above. However, Tobagi does not explicitly show that bandwidth is allocated to a user connection based on the

ratio of priority that user connection bears to the sum of priorities of all user connections. On the other hand, Hahne teaches fair access of multi-priority traffic, wherein parcels of the same priority get the same bandwidth and parcels of different priorities are offered bandwidth in proportion to their bandwidth balancing factors [col. 7, equation 13, lines 30-34; col. 8, lines 22-26]. Given the teaching of Hahne, it would have been obvious to one of ordinary skill in the art to modify Tobagi in order to allocate bandwidths in proportion to priorities of user connections.

10. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobagi et al., U.S. patent 5,381,413 ("Tobagi"), in view of Shaffer, U.S. 5,673,253.

As to claim 15, Tobagi does not explicitly teach that bandwidth allocation is recalculated on an event driven basis. Shaffer teaches dynamic allocation of telecommunication resources: if the availability of resources is detected as being below a predetermined threshold level, bandwidth reallocation is triggered [col. 3, lines 24-30; col. 6, lines 1-9]. Given the teaching of Shaffer, one of ordinary skill in the art would have been motivated to modify Tobagi in order to get the quality of service or bandwidth up-to-date with the current events.

As to claim 16, Shaffer teaches that bandwidth of one or more established sessions may be reduced to avoid a blockage condition [col. 3, lines 24-30; col. 6, lines 1-9]. Therefore, it would

have been obvious that arrival of a new request for retrieval will according to Shaffer trigger a recalculation of bandwidth in order to ensure free bandwidth for subsequent requests.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

CHAPMAN et al., U.S. 6023456, Dynamic traffic conditioning, 02/08/2000.

BERTIN et al., U.S. 6011804, Dynamic bandwidth reservation for control traffic in high speed packet switching networks, 01/04/2000.

GITTINS et al., U.S. 5526350, Communication network with bandwidth managers for allocating bandwidth to different types of traffic, 06/11/96.

HAYANO et al., U.S. 5132966, Call control with transmission priority in a packet communication network of an ATM type, 07/21/92.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Q.-K. Le whose telephone number is (703) 305-0141. The examiner can normally be reached on Monday-Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess, can be reached on (703) 305-4792.

13. Any response to this action should be mailed to:

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or faxed to:

(703) 308-9051, (for formal communications intended for entry)

or:

(703) 305-5358 (for informal or draft communication, please label "PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to Crystal Park II,

2121 Crystal Drive

Arlington, VA., Sixth Floor (Receptionist)

14. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9700.

Q.-K. Le

Patent examiner

Art Unit 2757

GLENTON B. BURGESS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2700